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ABSTRACT

The paper is written in the form of three vignettes of a hypothetical special education teacher educator in the years 1975-76, 1985-86, and 1995-96. The intent is to trace developments in special education teacher education since the enactment of the Education for All Handicapped Children Act (P.L. 94-142) and to project trends for the next 10 years. Trends and issues identified for the 1975-76 period include an attitude of boundless optimism; litigation raising the national consciousness about the handicapped; an increasing demand for new teachers; course development in such areas as the severely handicapped and career education; and a large infusion of federal grant money for such innovations as competency based teacher education. Among current trends and issues illustrated in the vignette for 1985-86 are concern over appropriate identification measures for mildly handicapped students; mainstreaming; efforts by the federal government to extricate itself from the education of the handicapped; the demise of the Dean's Grants as a source of funding for preservice preparation of regular educators; a decreasing sense of mission; greater attention to direct instructional approaches rather than process remediation approaches; and increased emphasis on technology. Possible future scenarios for 1995-96 are discussed in terms of: the nature of schooling, teacher roles, personnel preparation, specialist credentialing, and program accreditation. (DB)

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The Professional Odyssey of Dr. Kairo Aorist

A Case Study of Teacher Preparation in Special Education

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The PROFESSIONAL ODYSSEY OF DR. KAIRO AORIST*

A Case Study of Teacher Preparation in Special Education

Preface

This paper traces the 25-year professional life of Kairo Aorist, a professional woman born during the 1940's and raised and educated in the Midwest. She attended her state university which, as luck would have it, was an early recipient of the federal largesse in special education. Recruited into the field of special education, she taught EMR students before returning to graduate school on a full fellowship (PL 88-164) to work on her MA Degree in Special Education. Impressed with the intellect, the humor, and the energy of her young professors (all of whom had pursued their graduate degrees under PL 85-926 fellowships), and excited by the dynamism and social usefulness of the field, she stayed to complete her Ph.D.

Along the way she had the opportunity for involvement in two innovative demonstration projects, both federally funded: the first (about 1966) focused on collaboration between special education and vocational rehabilitation in developing work-study programs to promote the vocational transition of EMR adolescents; the second (in 1968) piloted a consultation approach to serving learning disabled students in their regular classroom placements (today referred to as the mainstream). Infected by the general optimism of the field and imbued with the power of behaviorism to significantly impact on the skill attainment, functional level, and quality of life of the handicapped, she received her degree in 1969 and accepted a position in the growing special education department of Hopewell State University in the Midwest.

The three vignettes cover three separate academic years in her professional odyssey, each a decade after the other: 1975-1976; 1985-1986; and 1995-1996. They represent an attempt through a longitudinal case-study approach to reflect the past, present, and future of teacher education in special education.

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*Kairo is derived from kairos meaning "crucial moment" and Aorist from the Greek verb form for "past tense without indicating whether or not the action has been completed, repeated, or continued."

"Having Been Present At the Creation . . . ."

Academic Year 1975-1976

As the 1975-1976 academic year eased toward its conclusion, Dr. Aorist found herself enthusiastic about the general state of her world. It truly was the best of times--for society, for the field of special education, and for herself as a professional. A productive (e.g., published) assistant professor who had just received word that her bid for tenure and promotion had been approved, she knew her contributions (e.g., articles as well as course development) in the areas of behavior management and competency-based teacher education were viewed by her colleagues as significant. They were part of a wave of improved instructional technologies that were shaping societal concepts about the potential of handicapped individuals and the manner in which services should be delivered. She was fortunate to have gained a faculty position in one of the departments of special education created at senior universities in response to the growing demands for special education teacher preparation. Comprised of dynamic, young (average age 35.8) faculty committed to developing the <u>best</u> teacher preparation program in special education in the nation, her departmental colleagues viewed special education as the experimental arm of education, differentiated from general teacher education by the former's scientific, empirical, and theoretical orientation.

Having obtained their graduate degrees under federal fellowship programs of the 1960s, they were a group of

enthusiasts who had come of age during the Civil Rights Movement (in which most had at least dabbled as undergraduate students), the launching of the space exploration programs, the tragedy of a Vietnam involvement (resolved by an antiwar movement in which most of Dr. Aorist's contemporaries had been too engrossed in launching their careers to participate actively), the Women's Movement and, most recently, the conclusion of Watergate with the denouement of an entire Presidential administration. It was a time of populist empowerment, a time when individuals were convinced of their ability to shape events, a time of almost boundless optimism that wrongs could be set right and that good could prevail.

Within special education this optimism was manifest in a variety of ways. Wolfensberger's formulation of the concept of "normalization" had captured the imagination of professionals in special education and led to a reexamination of the labeling process. As a part of this reexamination, ten federal agencies jointly sponsored the Project on the Classification of Exceptional Children; Hobb's two volume edited work, Issues in the Classification of Children: A Sourcebook on Categories, Labels, and Their Consequences and his The Futures of Children resulted. Early intervention studies were demonstrating remarkable effects of early childhood education for the mentally retarded, and the work of Marc Gold and others was reformulating the field's concepts about the vocational potential of the handicapped. Hewett's engineered classroom and Hobb's Project RE-ED were piloting new approaches to working with behaviorally disordered and/or emotionally disturbed students. Class action

suits challenged both the failure of public schools to provide education to handicapped students and the overrepresentation of minority groups in special education. At the same time, the Willowbrook Wars and similar litigative battles contributed to a heightened national consciousness about the inhumane and nontherapeutic conditions of institutional warehouses for the mentally retarded and emotionally disturbed/mentally ill.

Dr. Aorist and her colleagues were intimately involved in the waves of change that eventuated in consent degrees, institutional reform, Section 504, and PL 94-142. While their mentors shaped the policies and masterminded the politics of the crusade for handicapped children, her generation directed its research, advocacy, and teacher preparation efforts toward reshaping education's notions about human potential, human rights, and appropriate service delivery. Many of them had testified in the class action suits against local and state education agencies and had participated in the November call-in campaign urging President Ford to sign The Education of All Handicapped Children Act.

The major problem of teacher preparation in special education was keeping up with the increasing demand for new special education teachers while at the same time modifying and redeveloping teacher training programs to reflect the emerging instructional technologies and emphases. The field's "best practices" had evolved dramatically from the generalized social adjustment orientation of ten years previously. Younger faculties, such as that at Hopewell State, had a vision of individualized instruction that was skill-oriented in terms of

academic, vocational, and social development. They were committed to documenting program efficacy in terms of observable changes in child behavior. Stronger emphasis was being given to preparing teachers for the severely handicapped as well as for young handicapped children (ages 3 to 8). Concurrently, the career education initiative within general education was having its impact on special education, as evidenced by the creation in 1976 of the CEC Division on Career Development. The Council for Exceptional Children provided leadership for many of these emerging trends through its topical conferences on instructional technology (1970), special education delivery in sparsely populated areas (1971), developmental disabilities (1972), career education (1973) and the culturally diverse (1973).

In Dr. Aorist's department, these emerging changes already were being reflected in its program offerings. At the undergraduate credential and MA degree program levels, coursework had been developed in the areas of the severely handicapped, career education, early childhood education, and protecting human rights of the handicapped; at the doctoral level, seminars were addressing these same issues from policy, research, and program development perspectives. Throughout the Spring, Dr. Aorist and her colleagues had been discussing additional curricular changes needed to respond to the new federal mandates, such as the requirements for nonbiased assessment, due process, and the development of IEPs. They viewed only the specific processes and format of the IEP as new, not the basic concept itself. Their teacher preparation program already emphasized highly individualized assessment and individually tailored "errorless"

learning programs for students, programs that would be delivered in a contingency-managed environment and that would result in pre-specified outcomes. They were now broadening their approach to include a more ecological orientation, with additional emphases on providing consultation and support to regular education teachers who integrated handicapped students into their classrooms.

The thoughtful, cohesive attention given these innovations was possible, in large part, due to federal grant monies. Their consolidated personnel preparation grant provided over $200,000 per year in faculty salaries, graduate student stipends, travel, consultants, and supplies and services in support of program development, implementation, and evaluation. The recent move away from categorical funding had permitted innovations that integrated the separate credential programs, providing for cross-categorical, competency-based preparation at the undergraduate, M.A., educational specialist, and doctoral degree levels. BEH monies funded faculty time for research and development and made possible off-campus retreats to examine departmental curricula and to conceptualize changes that would better integrate and articulate the categorical (LD, EMR, TMR, OH and BD) course offerings. The faculty had concluded that not only was coursework redundancy among the programs inefficient instructionally, it also contributed to teacher misconceptions that skills learned for one categorical credential could not be generalized to students served under a different category. Dr. Aorist and her colleagues collapsed categorical coursework where knowledge or skill overlap was considerable, but maintained

separate categorical class sessions to address those instructional/curricular considerations more applicable to a particular group. They were not attempting to prepare special education "generalists" to meet the the multifaceted needs of all exceptional children and viewed as unduly alarmist warnings that unchecked, noncategorical training could lead to stagnation of the field and increase the vulnerability of exceptional children to the emerging cultural and social movements that devalued life in general and that of the handicapped in particular (Conner, 1976).

They were convinced that innovative, competency-based teacher education would play a paramount role in realizing the full promise of P1 94-142. BEH looked to IHE's to provide leadership toward this end. Continuing dialogue was maintained between the federal officers and the field through BEH site visits to personnel preparation programs, regional meetings of project directors, the Leadership Training Institutes, and various other leadership advisory conferences. The professional leadership rotated through administrative roles in BEH, at the same time providing leadership to the Council for Exceptional Children and other professional organizations. Qualitative personnel training was viewed as the key to rectifying the inadequate and uneven distribution of services. Quantitatively, the demand also was high, for despite a ten-fold growth in the number of special education teacher preparation programs between 1958 and 1976, an estimated 50 percent of the task of preparing special education teachers was still ahead (Harvey, 1976).

As the 1975-1976 academic year came to a close, opportunities for teacher education programs in special education to impact on the quality and structure of service delivery for handicapped students appeared spectacular. Challenged by PL 94-142, teacher preparation programs were being called upon to provide, in large numbers, the most able, competent, and highly trained personnel that special education had ever known. Doctoral programs were flourishing, a sign of the strong widespread commitment to leadership preparation. The federal government promised assistance to universities in restructuring their training operations to meet new programmatic needs, to recruit students, and to work collaboratively with state and local education agencies. From federal policy pronouncements to personnel preparation efforts to educational delivery implementation the focus was on maximizing the individual potential of handicapped children and youth. As the nation began its countdown toward full implementation of PL 94-142, Dr. Aorist had every reason to conclude that these were indeed the best of times.

Now a full professor at Sunbeam State University (having joined the great Sunbelt migration five years previously), Dr. Aorist-Xtant reflected on how the 1985-1986 academic year had served as a marker for the field of Special Education. It had been a time for looking back, of documenting the progress of the past decade, and of celebrating the 10-year birthday of PL 94-142. A time of reaffirmation and of self-congratulation about the changes that had been wrought, and of remembrances about roles played in bringing about these changes. Dr. Aorist-Xtant privately thought that she detected a hollow ring in much of this self-congratulatory activity, suggesting that her colleagues might be as uncertain and as concerned about the future of special education as was she. It seemed truly to be the best of times (as documented by ten years of progress in opportunities for the handicapped) and the worst of times (as evidenced by budgetary incursions and revisionist efforts that sought to reinterpret "appropriate" service delivery for handicapped students).

Certainly, if she reflected only on the changes that had occurred in availability of educational and related services to handicapped children over the past ten years, the approbation was well-deserved. During the frantic years following the passage of PL 94-142, school services had undergone rapid changes in terms of numbers of students served, the scope of services offered, and the form in which services were planned and delivered. For example, during the six years between the initial 1976-1977

Childfind and 1982-1983, the numbers of handicapped children served by special education had grown 16 percent despite a national decline in the overall size of the school-age population. There had been an increase of 119% in the numbers of students identified as learning disabled, of 23% in the numbers of preschool children served, and of more than 70% in the numbers of post-secondary-age students served. This growth contributed to a swelling demand for new special education teachers, resulting in an expansion of teacher preparation programs and faculties.

These dramatic increases lead to considerable controversy over the issue of appropriate identification of learning disabled and other mildly handicapped students. The apparent overidentification fueled the move toward mainstreaming and revisionist interpretations of "least restrictive environment." The extent to which these environments provided the most appropriate education sometimes seemed secondary to concerns over placing students in non-specialized, more cost effective environments. Blatt (1983) observed that "to discuss Public Law 94-142 as a 'blockbuster' today is to exhibit naivete about the current federal effort (and national mood) to erase much of its scope and impact" (p.18). Turnbull (1984) noted that the federal government was moving to extricate itself from the education and care of handicapped individuals, using such strategies as deregulation, lowering both authorizations and appropriations, canceling eligibility of the handicapped for social security benefits, reducing the federal labor force available to monitor compliance, refusing to enforce federal laws, and using "block

grants" to encapsulate federal programs. He warned that these trends, coupled with decategorization and regular education mergers, signaled the potential demise of special classes for all mildly and some moderately handicapped children, potentially resulting in the "renaissance of second-class education for people seen by many to be worthy of only second-class citizenship" (p. 8).

Preservice preparation of regular educators to work with handicapped students had been richly funded by Dean's Grants for a period of years. With the demise of this special funding, the residual focus and quality of these efforts was unknown, although they undoubtedly had contributed to the widespread perception that little to no specialization was required for working with mildly handicapped students. Interpretations of PL 94-142 appeared to have shifted from an emphasis on providing optimal services that would maximize individual potential to providing only basic educational opportunities. Dr. Aorist-Xtant was unclear as to where the notion of a "cascade of services" now fit in her department's teacher training program: should it be included as a paradigm within the assessment/placement course, or only as a footnote in the historical overview portion of the curriculum? Many special educators were concerned that this shift, in combination with efforts toward merging regular education and special education, could result in fewer and less appropriate services for handicapped students. Those who had been professionally active in the early 1960s recalled how it was the failure to implement non-categorical entitlements and set asides, that lead to the Cary Commission Report and the

establishment of the Bureau of Education of the Handicapped. They feared that without a separate funding category and a separate funding audit, special education services of the future would be neither adequately funded nor delivered.

Dr. Aorist-Xtant wondered if current developments were necessarily an inevitable swing of the pendulum, or if the decreasing sense of mission, zeal, and vigilance were a function of the "greying of the field." Special education seemed to be losing a sense of its own history. Those professionals who had masterminded the growth of special education were now retired or preparing for retirement, taking with them their commitment, creativity, and political skill. By virtue of timing and effort they had achieved almost instant status as senior leaders, structuring the development of the field, shaping public policy, providing leadership to their professional organizations, and preparing (in the handful of doctoral programs that existed) the next generation of leadership. This second generation, fully supported as graduate students, benefited the most from the field's lightning-fast growth. They moved easily into the new faculty and research roles afforded by the rapid development of teacher education programs at senior universities across the land. Early in their careers they obtained federal funding to develop much of the instructional technologies and empirical base of special education practice. Now in mid-career (and mid-life), Dr. Aorist and her colleagues were shifting much of their focus away from special education, moving into deanship roles, entrepreneurial enterprises, emerging fields (e.g., educational applications of technology), and personal development agendas.

The third generation of leadership, having come of age professionally in a field that was already established, had neither the choices and opportunities nor the vision and zealousness of the previous two generations. Receiving only partial support as doctoral students and completing their Ph.D.'s at somewhat older ages, they only rarely found tenure-track research and teaching positions available at major universities. Instead, they typically moved into middle management roles within local and state education agencies or accepted faculty positions at smaller, non-research-oriented IHEs. In one sense, the diminishing resources and declining growth in special education constituted a double-edged sword, limiting opportunities for innovation, expansion, and professional development, while at the same time more broadly distributing the pool of highly prepared leadership personnel.

Dr. Aorist-Xtant found that she was occasionally nostalgic for the former period of rapid growth and development. There now was less infusion of new faculty, and with declining enrollments and an average faculty age of 47.3, it was unlikely that there would be many new positions in the near future. The ambition, energy, and drive of new, young faculty was a sadly missing element in most teacher education programs. It was but one of many changes associated with a field characterized by declining demand. In contrast to the paramount concern for educational equity of a decade or two ago, contemporary concerns were directed toward "excellence in education" and educational reform. A general loss of public confidence in the schools had occurred, a loss of confidence that, despite the increased number of

teacher education programs now reviewed and accredited by NCATE, extended to teacher education as well. Only weeks before the Secretary of Education had declared as unnecessary formal, university-based programs for teacher credentialing. It seemed to Dr. Aorist-Xtant an unfortunate time for NCATE to have moved to unit accreditation, diluting even further the quality of their review. Hopefully, the CEC Standards would be utilized to upgrade program review and accreditation within special education.

Although a remarkable empirical base had been developed in both special education and general education, the curriculum reform issues within teacher preparation focused little on psychological variables related to knowledge about teaching and learning. Instead, they addressed societal phenomena related to economic and demographic concerns, such as the shift from an industrial to an informational/technological age and the increased cultural and linguistic diversity of the nation. In special education, as in general education, the focus of educational change was primarily on the context of service delivery (e.g., number of instructional minutes, length of school year, community-based, mainstreamed and/or integrated settings). Instructional approaches for which an empirical base had emerged focused on individualization within small groups in contrast to the individually "prescriptive" approaches popular a decade or so earlier. Further, considerably greater attention was now paid to directly providing instruction for achieving targeted goals rather than on the now discounted process remediation approaches.

The increased numbers of specialization areas, each supported by separate journals, textbooks, professional organizations, topical conferences, and the like, made it difficult for Dr. Aorist-Xtant to keep up with the field. This situation was further aggravated by the range of works on related topics (e.g., futures forecasting, leadership skills, and national general education reform initiatives, issues, and trends) that she felt compelled to read. This information, combined with a tremendous increase in the amount of time she spent working directly with local, regional and state educational agencies, made it difficult for Dr. Aorist-Xtant to maintain currency in even a limited number of specializations.

One area in which she was floundering involved the applications of technology to special education, an increasingly important skill area in teacher preparation. A new CEC division (Technology and Media) had developed in response to this thrust and CEC was offering topical conferences and institutes on technological applications in special education. The Sunbeam State program had recently developed a specialized course in this area, one designed to cover a wide variety of technologies, including those that would prepare teachers to deal effectively with physically and sensorially impaired students "mainstreamed" into their programs. This generic course represented the department's first effort at incorporating training developed through a separately-funded personnel preparation project in microcomputer applications into all of its credentialing programs. In addition, the department was developing several elective courses in microcomputer applications and two faculty

had recently applied for post-doctoral fellowships to extend their skills in this area.

Within its severely handicapped program, the focus had shifted to community-based instruction and transition into adult and vocational living environments. Whereas ten years ago the emphasis had been on younger SH children, the early childhood years were now covered under a special program funded by its own OSERS personnel preparation project. The vocational thrust of the SH program was strengthened by a special project in this area as well as by a related service project in career education that cut across both the SH and mildly handicapped programs. The department also had developed specialized programs (both OSERS funded) for preparing teachers of the severely emotionally disturbed as well as teachers to work with handicapped students from diverse ethnolinguistic backgrounds. As a part of the latter, the faculty was in the process of reviewing all course offerings for infusion of appropriate competencies relating to cultural pluralism and English as a second language. In addition to these efforts, the department had recently received a related services project to prepare parents and professionals across service agencies in collaboration skills.

While they sometimes bemoaned the amount of time they spent preparing project proposals for each of the separate competitions, the faculty at Sunbeam State found their word processors helpful in refocusing a single proposal to fit several competitions. Occasionally this paid off in that more than one of the versions of a given proposal would be funded. Overall they were pleased to be able to offer training in so many of the

eleven federal priority areas for special education personnel preparation. They were somewhat concerned that content from one project was either applicable to or redundant of other departmental training projects, and attempted to find time (between writing and administering their separate projects) to explore ways to better interface their efforts. They recognized that the proliferation of federal priorities contributed to program fragmentation, in contrast to the program integration encouraged under the program assistance grants of the previous decade. However, they found that they had little opportunity to communicate these concerns, as OSERS civil servants seldom sought true dialogue with the field.

The Sunbeam State faculty were beginning to explore ways in which they could provide a more generically focused teacher preparation curriculum within the context of the separately funded programs. The trend toward more heterogeneous grouping of students, partly due to emerging interpretations of least restrictive environment, and partly due to the developing preference for neighborhood schooling (particularly in smaller and rural districts), meant that teachers required broad, generalizable preparation. More generic preparation also could serve as a mechanism for assisting special education teachers to adapt to the rapid and continuous changes taking place in instructional and service delivery approaches. Dr. Aorist-Xtant's department recently had conceptualized a set of consumer research competencies for all teacher trainees in an endeavor to prepare teachers who could maintain currency and legitimacy in the face of changing practices.

Achieving a balance between providing the necessary specialized skill training and cross-categorical generic preparation was a major challenge facing special education teacher education. The declining attractiveness of special education teaching--due both to personnel shortages in regular education and the increased class sizes and paperwork requirements of special education--too frequently meant that at the same time that they were expanding program content, special education faculties were decreasing both the entry criteria and length of the program required for student trainees.

The potential ramifications of such divergent pressures did not make Dr. Aorist-Xtant very optimistic about the future of special education services for handicapped students. A decade ago books such as The Futures of Children and Future Shock were directing attention toward the future implications of current practices and developments. By the mid-1980s, forecasting had become almost an obsession, with articles, books, journal issues, monographs and even special conferences and institutes directing attention toward the megatrends and waves of change that were shaping society. Within special education, the complexities and difficulties of the present made forecasting an uncertain and even precarious endeavor. The public policies formulated within the ensuing years would determine the extent to which special education services for the handicapped would flounder or flourish.

Through the Looking Glass*
Reflections on 1995-1996

On an unusually warm day in the early spring of 1986, Dr. Aorist-Xtant sat in her study trying to get started on the rather awesome task of conjecturing the future. So mired was she in the day-to-day concerns of the present, so dizzying were the possibilities of the future, that she was having a particularly difficult time. She was beginning to get very tired of sitting in front of the computer, so she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid) whether the pleasure of completing the project would be worth the trouble of doing it. Quite unexpectedly, a small MacMouse suddenly scampered in front of her, saying "Oh dear! Oh dear! I shall be late for the future." Our heroine of course rose to the byte and followed close on his heels, finding herself, in due course, falling down what seemed to be a very deep hole. Landing with a thump, she jumped up and looked around at what was new and uncertain terrain.** A large sign at the beginning announced "You are now leaving the Present. Welcome to 1995-1996."

The sign was very clear, but little else was. A variety of mist-shrouded roads diverged into the future. Venturing down the one labeled Special Education Teacher Preparation, Dr. Aorist-Xtant was able to barely make out a series of roadsigns

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* For liberties taken, gratitude and apologies to Lewis Carroll
** Adapted from chapter one of Alice in Wonderland.

leading she knew not where. The signs pointed toward (1) the nature of schooling, (2) teacher roles, (3) personnel preparation, (4) specialist credentialing, and (5) program accreditation. Where did the roads lead? What would these places be like? Dr. Aorist-Xtant stood there in the middle of the road trying to presage the directions of the future.

The Nature of Schooling

Standing at the crossroads of the future, Dr. Aorist-Xtant speculated on how the nature of schooling might evolve. Would disaffection with public education accelerate or would the reform efforts of the intervening decade lead to a resurgence of public confidence and support? Many of the reform efforts of the early and mid-1980s were more quantitative than qualitative in nature, lengthening the school day and academic years, increasing the number of "hard" subjects required for graduation, imposing standard curricula on teachers, and increasing the number of college entrance requirements. Not only did they fail to address the needs of poor, minority, nonacademic, and handicapped students (in other words, of the lower 40% or so of the school-age population), they were occurring at the same time as funding cutbacks for Title One, Head Start, bilingual education, migrant education, vocational education, and special education programs. In the future, would all educational monies be consolidated so that state and local educational agencies could decide which needs to meet? Would parents' groups lose the effectiveness demonstrated during the early years of defederalization (Meyen, 1983) and fragment into competing and ineffective special interest groups (e.g., parents of mildly

handicapped secondary students competing against parents of young, preschool severely handicapped children for services)?

In the face of spiralling teacher shortages, would ways be found to recruit, train, employ, and retain sufficient numbers of qualified personnel? Or would the greater heterogeneity in students taught, expanded class sizes, relatively low pay, abbreviated and inadequate teacher preparation, limitations on professional growth opportunities, and the reconceptualization of teachers as technicians instead of as professionals, exacerbate the problems of public education? Failure to find solutions to these difficulties would, at the very least, accelerate the flight to private education, with public schools increasingly relegated to providing instruction to only the poor and nonacademic segment of the student population. At the very most, it would be the death knell of the great American experiment in public education.

Would attempts to address these difficulties lead to increased and more articulated programs for tracking students, facilitating the most capable and protecting the most handicapped, with a myriad of additional academic, vocational, and technical tracks available to those in between these two extremes? Or would appropriate uses of technology negate many of these concerns? Would the availability of individual microcomputers in the classroom, with a wide variety of exemplary software, buttressed by interactive video discs and other technological innovations, facilitate the ability of the schools to optimally address the learning needs, goals, and styles of each individual learner? Lance, commenting in 1977 on education for handicapped students, had noted that

> if a truly appropriate education is to be provided for each child, teachers must be supported by a technology that will permit them to deal with a vast range of individual differences. A teacher cannot wing it with a few textbooks and a ditto machine. (p. 94)

Appropriate applications of technology could greatly expand the ability of regular education to meet the specialized needs of some handicapped students. It would be possible for widely divergent students to engage in highly prescriptive individual and small-group instructional programs under the supervision of an accomplished professional, assisted by paraprofessionals and supported by skilled specialist consultants. On the other hand, budgetary constraints might result in administrative decisions that would make instructional technology available to some students and not to others. At the same time, widespread availability of computer and video technology in the homes could result in much of a child's formal education being delivered outside of the school, with differential availability widening the achievement gap between the middle-class and the poor. Potentially, alternative measures, such as public T.V., library collections, and public assistance programs, could reduce such disparities of opportunity.

By the year 1995-1996, technology could significantly compensate for handicaps and optimize individual achievement. Educational software of the 1980s already had permitted teachers to better measure academic performance, to maintain detailed records of student progress, to manipulate the rate of presentation and the difficulty level for each student, to shift readability level to match the skill level of students, and to increase the communicative production of students. It could be that by the mid-1990s, textbooks would be rare, replaced by

electronic learning modules and interactive problem-solving activities delivered by voice-activated computers and typewriters (Kornbluh, 1982). New technologies could place the curriculum within the reach of students who were unable to read or write, or to see or hear. They might prove capable of inducing operant responses in even the most severely handicapped. At the other end of the special education spectrum, artificial intelligence might compensate for the specific difficulties of students previously labeled as "learning disabled" or "EMR". The promise of mainstreaming might be fulfilled as regular classroom teachers, with consultative assistance from technical and learning specialists, were enabled to provide meaningful instruction to handicapped students in integrated environments.

Teacher Roles

As a teacher educator, Dr. Aorist-Xtant was intrigued about what these unknowable futures heralded for the teacher role. Teachers necessarily would become highly skilled and technologically competent educational planners and instructional managers. They would assess student needs, evaluate and select programmed learning modules, and monitor the computer-stored student data. They probably would be responsible not so much for direct instruction in basic skill areas as for ensuring that this instruction was provided by appropriate electronic learning programs. They likely would have greater responsibility for teaching future-oriented thinking strategies designed to enable students to adapt to coming changes.

Perhaps there would be greater differentiation of teacher roles, not so much in terms of ability levels or even subject

areas, but in terms of the level of instructional responsibility. There might be teacher technicians responsible for the daily management of the learning laboratories, monitoring and trouble-shooting technologically-delivered instruction. Generically prepared in pedagogy and technology, they would have the most direct contact with students, acting chiefly as managers of individual instruction. Subject matter leaders might work with small groups of students, leading seminar discussions about electronically-delivered subject matter; personal development coaches might similarly work with small groups of students to facilitate socialization through discussions about interpersonal difficulties or problems in dealing with change. Curriculum specialists might be responsible for keeping abreast of program options in designated areas and recommending changes in the use and sequencing of software programs.

Enhanced capabilities for pinpointing and adjusting to individual differences could create new roles for special education learning specialists. These experts might be responsible for maintaining currency in the development of technological adaptations for students with physical, sensory, cognitive, or behavioral handicaps. They could serve as program consultants or team leaders for students designated for special intervention options, working with parents, representatives of related service agencies, and the other educational personnel to provide appropriately articulated curricular and instructional experiences. Hopefully, interactive telecommunication systems would be utilized to minimize the difficulties in scheduling these cross-disciplinary team meetings. This same sophisticated communications technology could permit almost instant

consultation with data bases, innovators, and researchers located anywhere in the world.

On the other hand, the availability of computerized curricula might lead to greater standardization of educational programs, not to greater individualization. It might become possible to deliver quite efficiently curricula that was neither effective nor appropriate. Policy makers might interpret the availability of computerized learning packages as further support for defining the teacher role as that of technician. A single standard curriculum with an undifferentiated instructional approach might be mandated for all students. Equality of educational opportunity might be interpreted as equality of access to a standard program. Or, in the name of excellence, the schools might divide students into tracks, one composed of capable students for whom academic instruction would be provided, with the other composed of nonacademic students with whom the schools would play primarily a "holding" or occupational preparation function. A possible third group of children, so divergent as to be considered "surplus", might be warehoused in separate, noneducational facilities or camps. Blatt (1983) suggested that such places might be "attractive" in that they would segregate the nonproductive, would stimulate the creation of a major service industry as well as several contiguous industries (e.g., construction, manufacturing, food services, etc.), and would protect families against the catastrophic responsibilities of caring for defective children. It was, of course, also possible that the content and structure of education in the mid-1990s might be largely indistinguishable from that of the 1980s. Underfunding, inattention, inertia, habit,

territorial rigidity, unionization of teachers, and luck might combine to keep it basically untouched by change--which would be neither the best nor the worst of times.

Personnel Preparation

Standing at the crossroads, it was clear to Dr. Aorist-Xtant that teacher education programs could play a significant leadership role in ensuring that a favorable scenario unfolded. Within both general and special education, this would require significant changes if teachers were to be prepared as technologically skillful, individually flexible, educationally responsive and futures-oriented professionals. Teachers, as well as teacher educators, would need to engage in intensive life-long learning or retooling efforts to remain on top of the waves of change. The pivotal nature of educational decisions on individual students would highlight the importance of a teacher preparation program characterized by a solid grounding in the liberal arts and humanities, a broad generic base of professional preparation, and multiple options for intensive, specialized technical training at an advanced level.

Teacher preparation programs probably would reflect the multiplicity of roles for which educators would be credentialed. All teachers would be competent in generic skills of technological pedagogy, with additional specialization skills targeted for specific roles. As services for handicapped students by then would be mandated from birth through age 25, with options available for life-long access to the educational system, the range of special education specializations might increase.

Special education teacher preparation could include specializations in curricula planning, instructional alternatives, infant intervention, personal and vocational development, vocational re-entry, and others. Endorsements to special education specialist credentials could be available in each of these areas, with advanced specializations designating expertise in adapting software and prosthetic devices as well as in liaison with the community and home environments. Teacher preparation might reflect a service delivery system that merged the programs for" mildly handicapped" with other efforts (e.g., remedial reading, upward bound, Title I) to address the needs of nonacademic students, with a new credentialing specialization in the "mildly non-handicapped." The proliferation of roles undoubtedly would be reflected in OSERS personnel preparation priorities, of which there could be 30 or 40 by 1996, several of which would be educational in scope.

The cross-disciplinary focus of the 1980s could have expanded and become more formalized, a trend that would be particularly apparent at the vocational transition and early childhood stages. The increase in numbers of extremely fragile and severely handicapped children might lead to a reinterpretation of the meaning of "education." The public might choose to exclude from education those unable to make observable responses, with responsibility for this expanding group being assumed by the medical or social services fields. Or, a new interdisciplinary specialization area could emerge to prepare teachers and advocates for this group. Perhaps a new CEC division would develop in behalf of non-responsive infants and children.

The gravity of decisions about the deployment of fiscal, technical, and medical resources in the 1990s could mean that personnel preparation programs would devote considerable attention to philosophical and ethical issues. These would include the issues that transcended technology, that challenge individuals to reexamine their basic values and beliefs, and that confront the fundamental issues of the meaning of human worth and dignity (Cegelka & Lewis, 1983).

Personnel preparation programs of the future should exemplify the technological applications expected of future teachers. These competencies could be infused into all coursework (e.g., characteristics, IEP development, assessment, instruction, behavior management, working with parents, etc.) as well as into the practica and internship experiences. Field experiences could be monitored and evaluated, at least in part, through two-way computer-input systems which would permit detailed daily feedback, with prioritized multiple recommendations provided to individual trainees. Computer access could greatly broaden the range of training programs, seminars, and options available to a trainee at a given institution. This could facilitate the training of teachers for remote areas as well as for low-incidence populations, at the same time equalizing the quality of personnel preparation available.

Doctoral programs in special education leadership preparation could well be flourishing by the mid-1990s due to demands created by general population growth and the increasing survival rate of medically fragile/severely handicapped children and youth. Demands for retraining in order to maintain currency in a rapidly changing society could contribute to the creation of

additional teacher education positions at both IHEs and in state and local education agencies. This might well occur at the very time that many of the second-generation leadership were beginning to look to early retirements, further amplifying a need for new leadership personnel. At the same time, the complexity of the problems exhibited within the special education population along with the promises of developing technology might lead to a resurgence of federal support for research efforts, creating a new demand for highly qualified special education researchers.

Program Accreditation

As Dr. Aorist-Xtant contemplated the last remaining roadsign, she wondered about the future landscape of program accreditation for teacher education. Would 1995 be the year that a twenty-campus California State University System would apply to NCATE for unit accreditation? Or would the proliferation of new specializations, coupled with continuing pressures for quality, have returned teacher education to accreditation of individual programs within colleges of education? Would teachers' unions be key players in determining the scope and delivery of teacher preparation? Would there be mandated national accreditation, reflecting a national teacher preparation curriculum? Would pre-service accreditation continue to be linked to university-based programs, or would a variety of public and private vendors compete for licensing as teacher preparation programs? Would formal partnerships for teacher preparation have developed among IHEs, local school districts, and state education agencies? Or would the federal leadership, responding to teacher shortages within the context of their own unique perceptions,

have guided education into defining teachers as career-ladder technicians, requiring apprenticeship training with no formal pre-service preparation? The future of program accreditation was inextricably linked to the future of other phenomena impinging on special education. Evolutions occurring within other regions of education would directly shape this particular landscape.

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The far-ranging and potentially contradictory possibilities of the future were making Dr. Aorist-Xtant quite dizzy. The future seemed both unknown and unknowable. For every future possible, another, quite different future could evolve. Slumped over her microcomputer with her face on the keyboard, Dr. Aorist-Xtant was attempting to differentiate visions from nightmares from dreams when the same small MacMouse once again darted into view. Hailing him, she asked, "Would you tell me, please, which way I ought to go from here?" "That depends a good deal on where you want to get to," said the MacMouse. "You are sure to get somewhere, if you only walk long enough."*

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* Adapted from chapter six of Alice in Wonderland.

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